2018

Metadata--a five part introduction

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μετά-data

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Workshop Goals

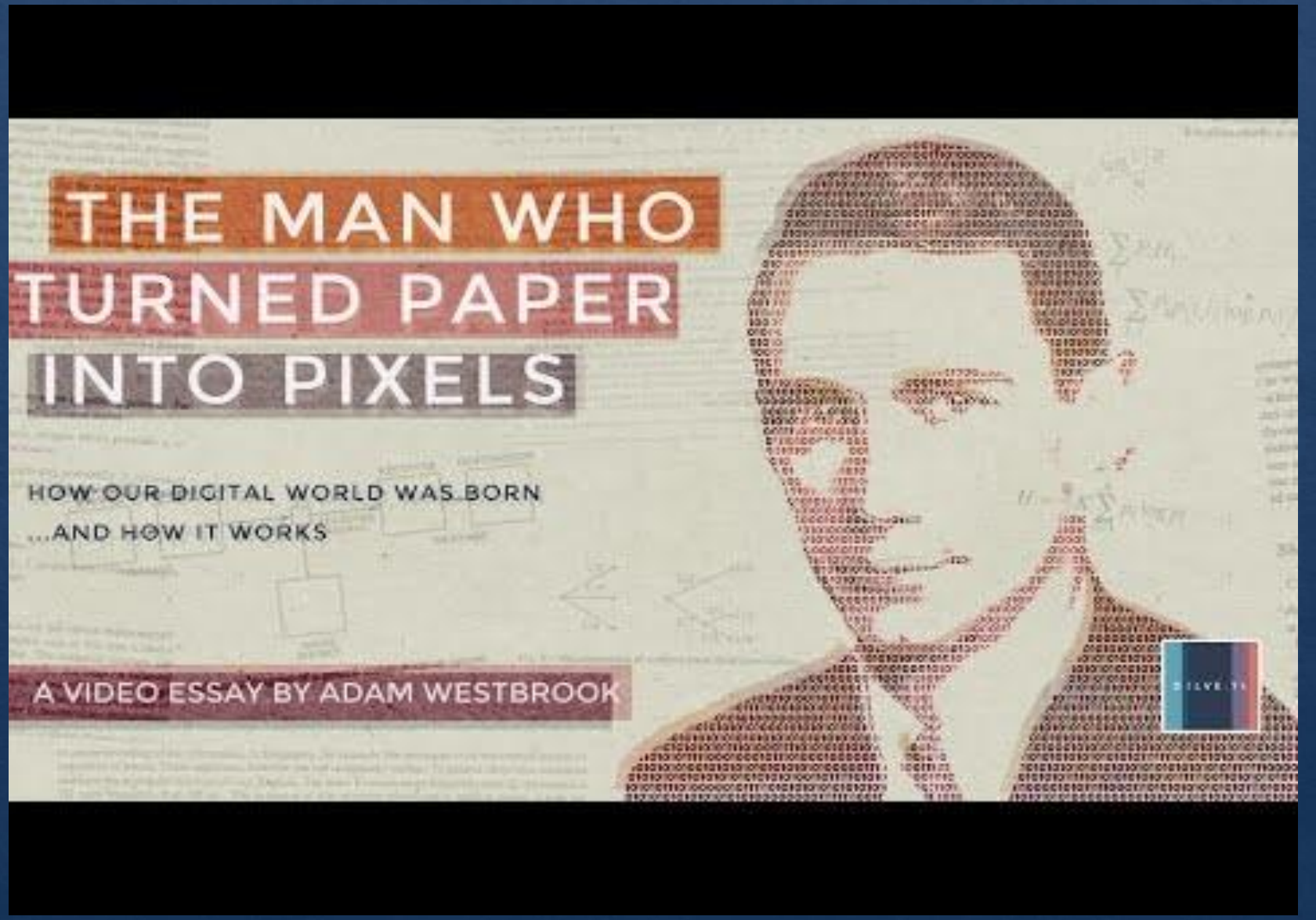
- Understand what metadata is
- Understand the social context of metadata / encoded knowledge
- Understand how structured information is used by humans and machines
- Understand the benefits and drawbacks of standardized information
- Understand the role of metadata in preservation, use, and reuse of information

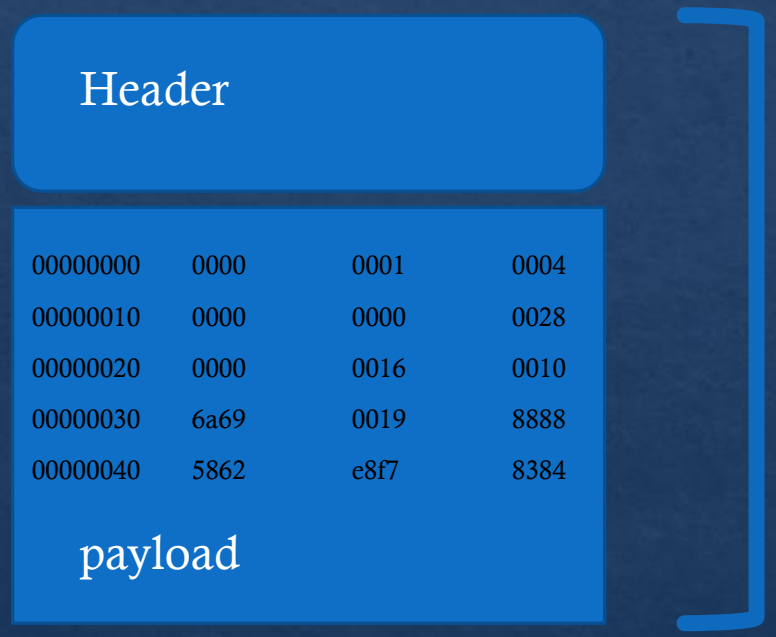
μετά-data

what

Discussion 1

What is Metadata?


THE MAN WHO
TURNED PAPER
INTO PIXELS
HOW OUR DIGITAL WORLD WAS BORN
...AND HOW IT WORKS
A VIDEO ESSAY BY ADAM WESTBROOK



Digital File Container
(.txt, .docx, .jpg, .tiff, .png, .xlsx, .pdf)

Administrative Metadata
Creator, Date, Title, Related Files, Rights, Contributor, Identifiers, File Names, etc.

Descriptive Metadata
Description of content, Keywords (tags), Subject-specific information, Coverage, Dates, etc.

Structural Metadata
Pagination, Headings, Relationships, etc.

Technical Metadata
Software, Hardware, Structure, Format, Colorspace, Size, etc.

Preservation Metadata
Software, Hardware, Format, Actions, Checksum, etc.

Digital Object

Digital File (image, dataset, text)

Header

00000000	0000	0001	0004
00000010	0000	0000	0028
00000020	0000	0016	0010
00000030	6a69	0019	8888
00000040	5862	e8f7	8384

payload

Metadata sidecar

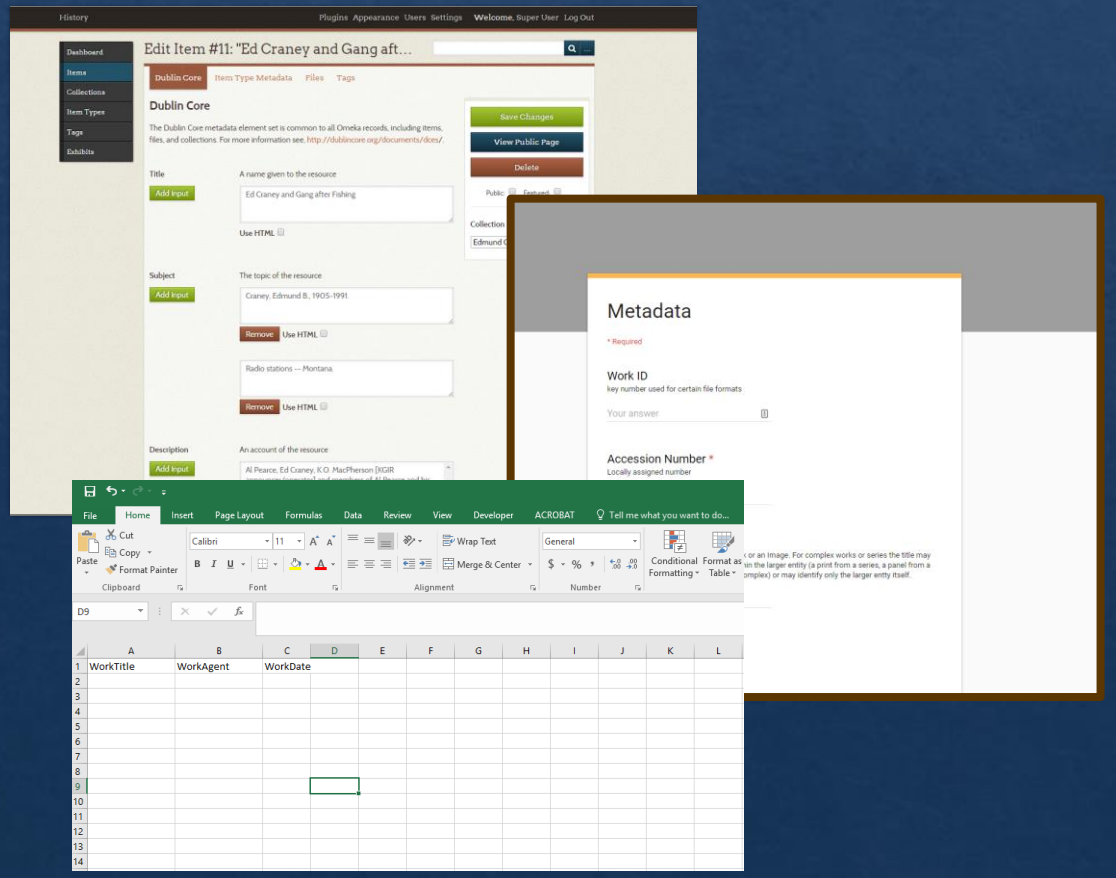
XML declaration

```
<METS:fileGrp>
 <METS:file ID="MUSIC_FOLDER_DC" MIMETYPE="text/xml">
  <METS:FContent>
   <METS:xmlData>
    <oai_dc:dc xmlns:oai_dc="http://www.openarchives.org/OAI/2.0/oai_dc/"
     xmlns:dc="http://purl.org/dc/elements/1.1/">
     <dc:title>Music Folder</dc:title>
     <dc:creator>Chris</dc:creator>
     <dc:subject>music</dc:subject>
     <dc:description>This folder contains my music files.</dc:description>
    </oai_dc:dc>
   </METS:xmlData>
  </METS:FContent>
 </METS:file>
</METS:fileGrp>
```

XML CONTENT

Metadata (sidecar)

Input



Output XML

```
<?xml version="1.0" encoding="UTF-8"?>
<vra xmlns="http://www.vraweb.org/vracore4.htm"
   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
   xsi:schemaLocation="http://www.vraweb.org/vracore4.htm
http://www.loc.gov/standards/vracore/vra-strict.xsd">
   <work id="w_001" source="private collection">
      <agentSet>
         <display>Magritte, René</display>
         <notes/>
         <agent>
            <name vocab="ULAN" refid="500022967"
type="personal">unknown</name>
            <role>painter</role>
         </agent>
      </agentSet>
      <culturalContextSet>
         <culturalContext>Belgian</culturalContext>
      </culturalContextSet>
      <dateSet>
         <display>ca. 1928-29 (creation)</display>
         <date type="creation">
            <earliestDate>1928</earliestDate>
            <latestDate>1929</latestDate>
         </date>
      </dateSet>
</work>
```

Output JSON

```
{
  "vra": {
    "work": {
      "agentSet": {
        "display": "Magritte, René",
        "notes": "",
        "agent": {
          "name": {
            "_vocab": "ULAN",
            "_refid": "500022967",
            "_type": "personal",
            "toString": [null]
          },
          "role": "painter"
        }
      },
      "culturalContextSet": {
        "culturalContext": "Belgian"
      },
      "dateSet": {
        "display": "ca. 1928-29 (creation)",
        "date": {
          "earliestDate": "1928",
          "latestDate": "1929",
          "_type": "creation"
        }
}
```

Metadata

<?xml version="1.0" encoding="UTF-8" standalone="no"?>

<Metadata xmlns:tt="http://www.ttroup.org/originalobservations">

<tt:OriginalObservation>**Data About Data**</OriginalObservation>

<tt:OriginalObservation>**Structured Information**</tt:OriginalObservation>

<tt:OriginalObservation type=quote src=NISO>**Metadata is structured information that describes, explains, locates, or otherwise makes it easier to retrieve, use, or manage an information resource. Metadata is often called data about data or information about information.**

</tt:OriginalObservation>

</Metadata>

XML

```
<?xml version="1.0" encoding="UTF-8" standalone="no"?>

<Metadata xmlns:tt="http://www.ttroup.org/originalobservations">

    <tt:OriginalObservation>Data About Data</OriginalObservation>

    <tt:OriginalObservation>Structured Information
    </tt:OriginalObservation>

    <tt:OriginalObservation type=quote src=NISO>Metadata is
    structured information that describes, explains, locates, or
    otherwise makes it easier to retrieve, use, or manage an
    information resource. Metadata is often called data about data
    or information about information.
    </tt:OriginalObservation>

</Metadata>
```

XML Declaration

Namespace

Tags = Elements = Fields

Attributes

Data = Values = Content

Exercise 1

Individually identify five assertions for two items

Discussion 2

How can these assertions be labelled?

Seeing Standards – Jenn Riley, 2010

- http://jennriley.com/metadatamap/seeingstandards.pdf

Dublin Core Metadata Element Set

- Title
- Creator
- Subject
- Description
- Publisher
- Contributor
- Date
- Type
- Format
- Identifier
- Source
- Language
- Relation
- Coverage
- Rights

Dublin Core Metadata

<record xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:dc="http://purl.org/dc/elements/1.1/" xmlns:dcterms="http://purl.org/dc/terms/">

<dc:title>Bucknell University Crafts Center</dc:title>

<dc:creator> Laird, Ralph E.</dc:creator>

<dcterms:dateCreated> 1974</dcterms:dateCreated>

<dc:type> Photograph</dc:type>

<dc:format xsi:type="dcterms:IMT"> image/jpeg</dc:format>

<dc:description> Student working with the pottery wheel in the Crafts Center.</dc:description>

<dc:subject> Student life</dc:subject>

<dc:subject> Ceramics</dc:subject>

<dc:subject> Bucknell University</dc:subject>

<dc:subject> Lewisburg, Pennsylvania</dc:subject>

<dc:source> Bertrand Library Special Collections/University Archives. </dc:source>

<dc:rights> This image may be protected under copyright law and may only be used for educational, teaching, and learning purposes. If intended use is beyond these purposes, it is the responsibility of the user to obtain the appropriate copyright permissions.</dc:rights>

<dc:identifier> BUH5332</dc:identifier>

<dc:relation> Photograph collection--Crafts Center--1970-1979</dc:relation>

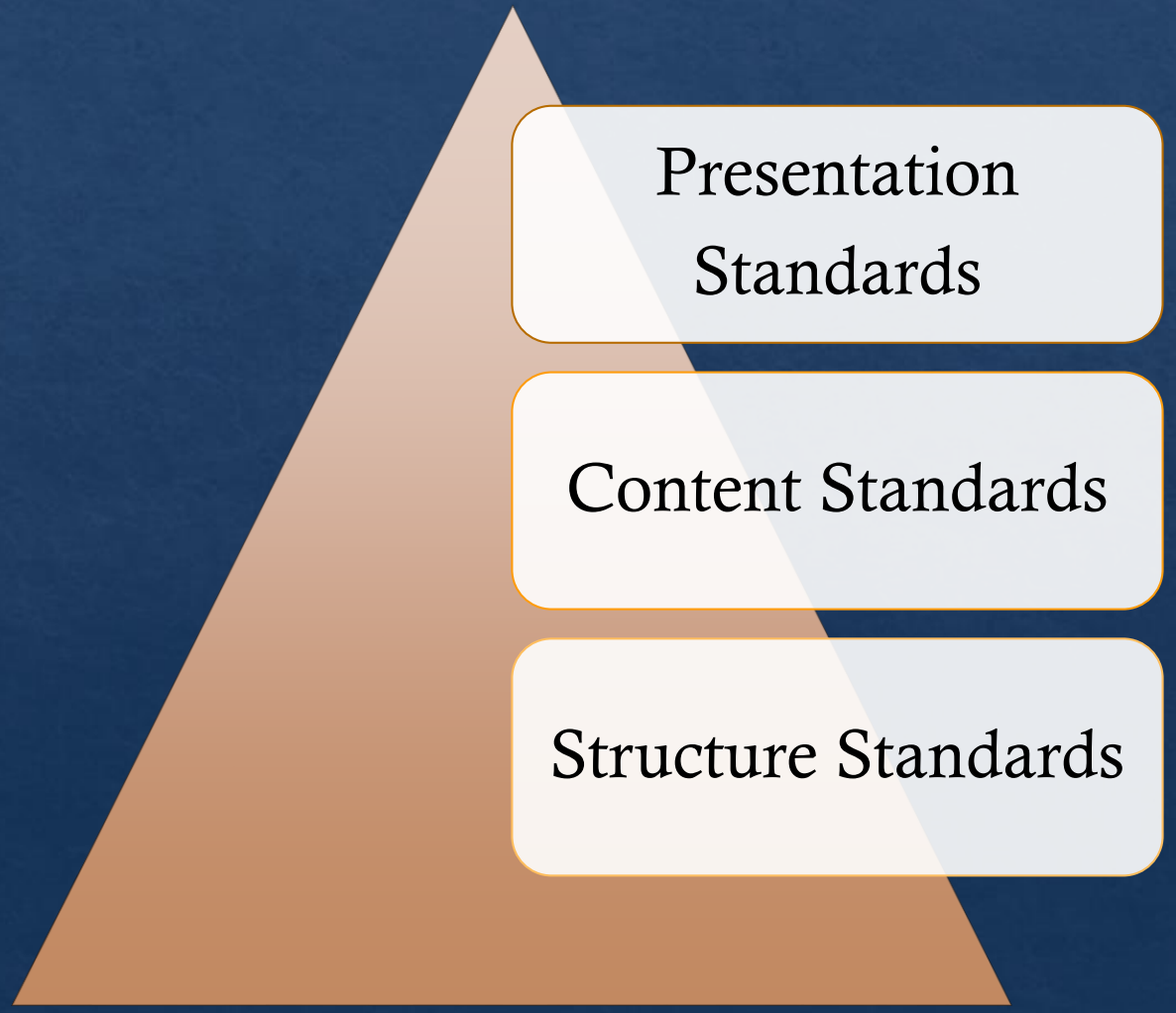
<dc:language xsi:type="dcterms:ISO639-2"> eng</dc:language>

</record>

Crosswalk


EnvML
…
Time
Latitude
Longitude
Altitude
…
Species
…
Environment
SensorML
Timestamp
…
X
Y
Z
Sensor
Precision
…
Mote

Standardized data



Metadata is Data

- **Structure Standards (see poster)**
- **Content Standards**
  - Biodiversity Information Standards
  - Cataloging Cultural Objects
  - Geospatial Standards
  - **Controlled Vocabularies**
    - Geographic Names Information System (GNIS)
    - Getty Vocabularies
    - Library of Congress Linked Data
    - Medical Subject Headings (MeSH)
    - Online Thesauri and Authority Files
    - PLANTS database
- Presentation Standards
  - ISBD

Content Standards

- Managed String Values –punctuation, capitalization, use of abbreviation, use of acronyms
- Encrypted
- Formatted numerals – 10000; 10-10; 10,000; 10011100010000; 10^4
- Formatted Dates
- Delimited
- Controlled vocabularies – defined terms, relationships, scope, and use.

  (e.g., AAT: http://www.getty.edu/research/tools/vocabularies/aat/index.html)

ISO 8601. xkcd: webcomics. 20130227. Available online at https://xkcd.com/1179/

Panofsky-Shatford mode/facet matrix

	Pre-iconography (Generics)	**Iconography (Specifics)**	**Iconology (Abstracts)**
Who?	Kind of person or thing (G1)	Individually named person, group, thing (S1)	Mythical or fictitious being (A1)
What?	Kind of event, action, condition (G2)	Individually named event or action (S2)	Emotion or abstraction (A2)
Where?	Kind of place: geographical, architectural (G3)	Individually named geographical location (S3)	Place symbolized (A3)
When?	Cyclical time: season, time of day (G4)	Linear time: Date or period (S4)	Emotion, abstraction symbolized by time (A4)

Armitage, L. and Enser, P.G.B. (1997), "Analysis of user need in image archives", Journal of Information Science, Vol. 23 No. 4, pp. 287-99.

Exercise 2

Use a schema to structure & collocate (crosswalk where necessary)

all the metadata collected in Exercise 1.

Look for iconographic or iconological metadata.

Identify at least one controlled vocabulary.

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context

Human  Human

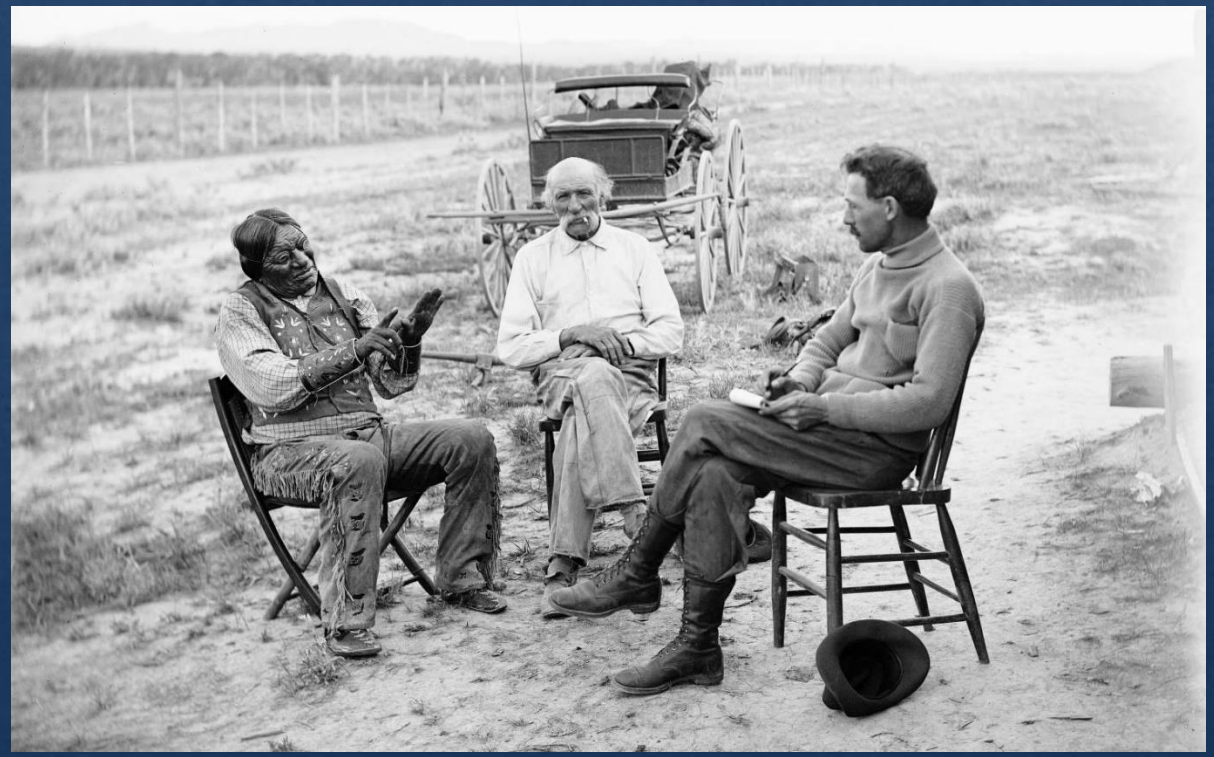
Unmediated

Unmediated Exchange and Storage

Information

Language, gesture, expression, tone, prosody, tempo, volume, etc.

Information



L.A. Huffman. White Bull Interview. Catalog #981-150. June 20 1901. Montana Historical Society Research Center Photo Archives. Helena, Montana.

Unmediated Exchange and Storage

Meaningful

Emotion, passion, organization, stewardship, refinement, persistence, enculturated exchange.

Meaningful

L.A. Huffman. White Bull Interview about the Battle of Little Bighorn with William Rowland and O.D. Wheeler. Catalog #981-150. June 20 1901. Montana Historical Society Research Center Photo Archives. Helena, Montana.

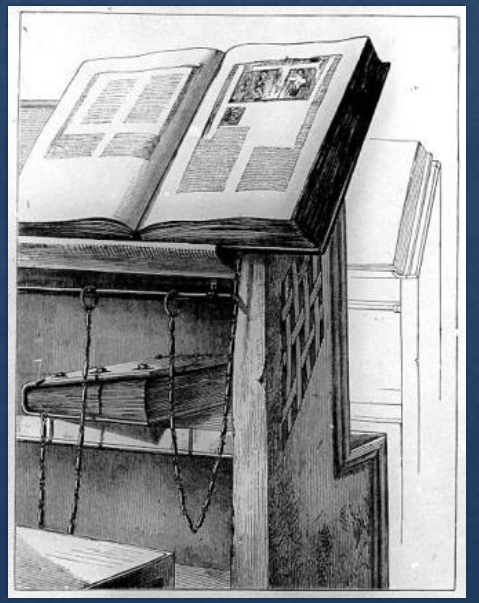
Human

Human

Mediated

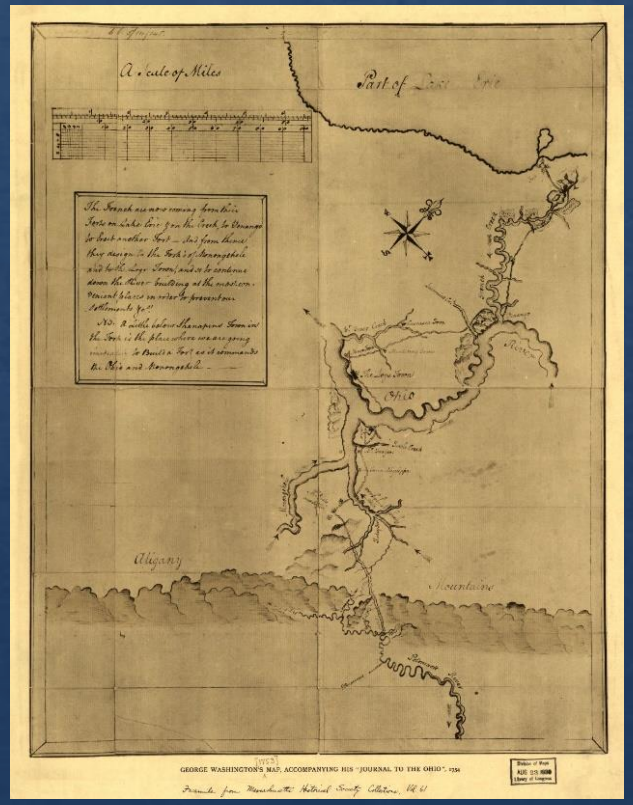
Storage

Luba Kingdom, Democratic Republic of Congo. Lukasa Memory Board. Late 19th early 20th century. Brooklyn Museum of Art. WikiMedia.

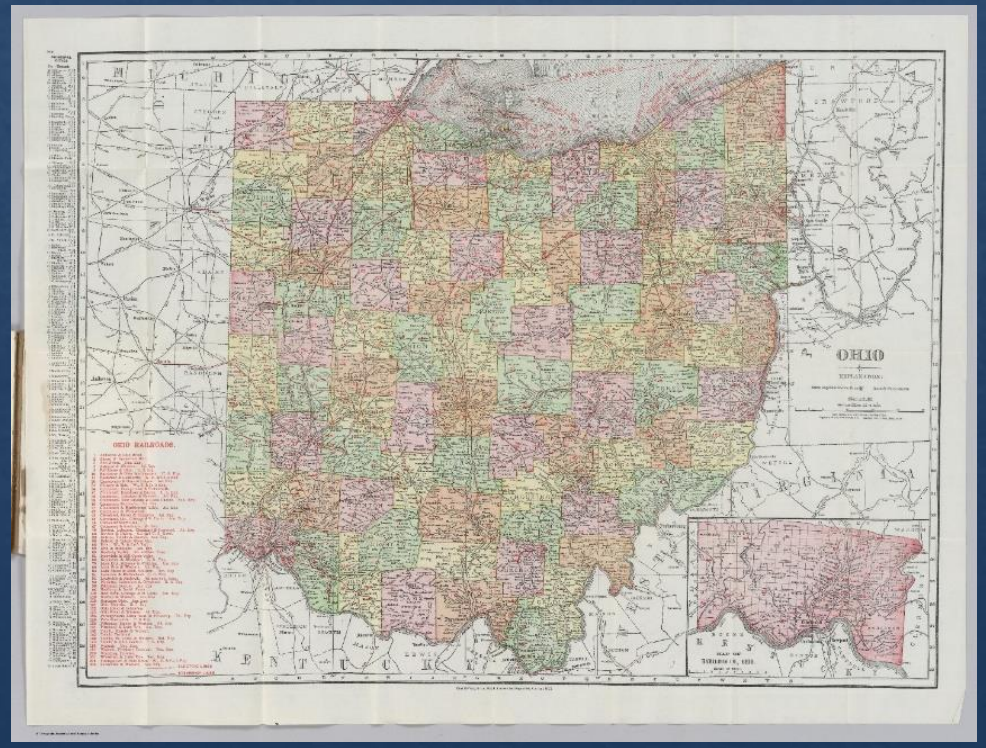


15th century Chained Book. Malatestiana Library,.Cesena, Italy. WikiMedia

Exchange

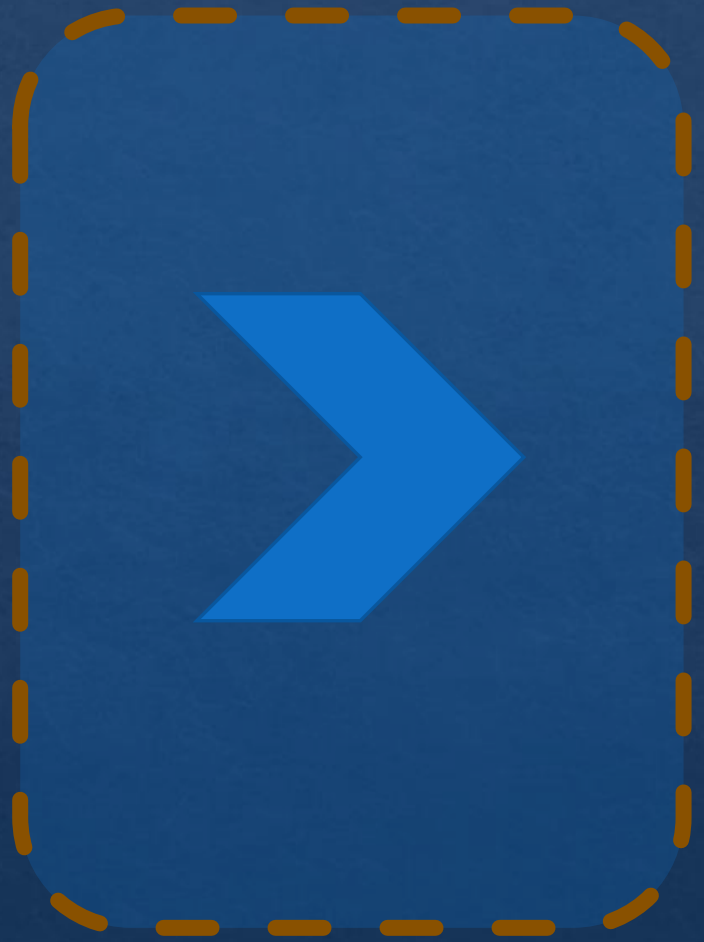


Washington, George. Map accompanying "journal to the Ohio." 1754. Massachusetts Historical Society. Boston, Mass. Library of Congress Prints and Photographs Online Collection.



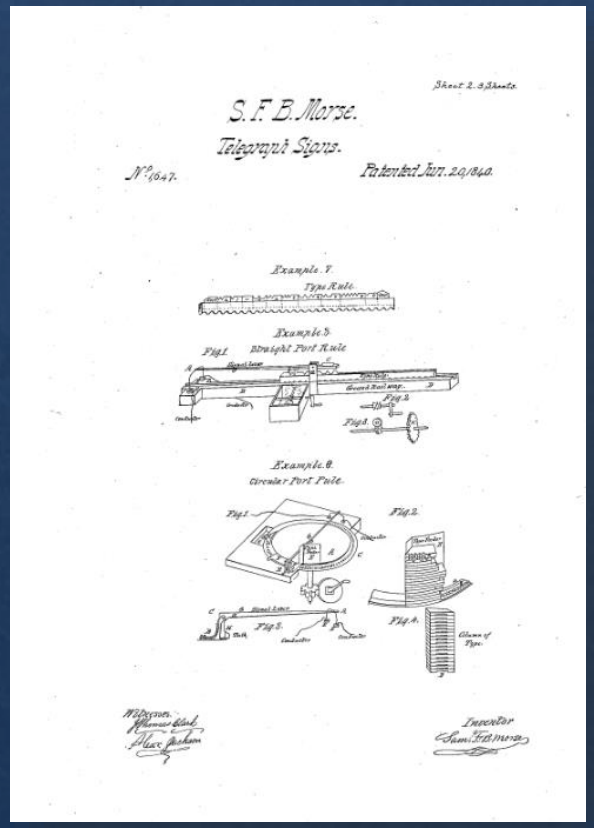
Rand McNally & Company. Ohio. 1911. Chicago: Rand McNally & Co. David Rumsey Map Collection.

Human



Human

Electronic Media



Morse, Samuel B. Improvement in the mode of communicating information by signals. 1840. Patent No. 1647 A. New York, New York.

First Associated Press Wirephoto transmission, small plane in Adirondacks. 1935. http://norman.hrc.utexas.edu/nyjadc/ItemDetails.cfm?id=266

Beatles arrive at JFK, 7 February 1964, By 1965 the Associated Press approved the first photo transmission standard

Human

Machine

Electronic Media

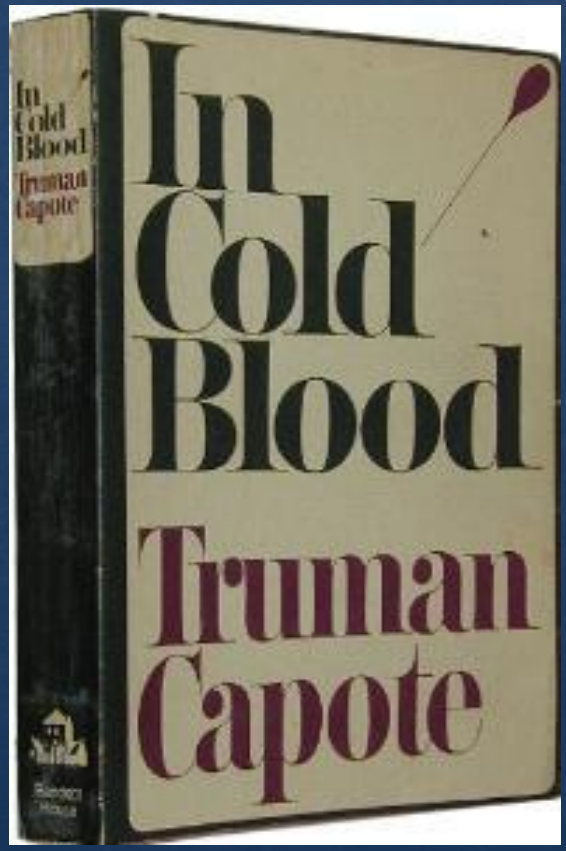
OCLC 264953 No holdings in PBU - 2281 other holdings
No PBU holdings in GLIMIR cluster; 2283 other holdings in GLIMIR cluster of 3

Books | Rec stat c | Entered 19720427 | Replaced 20180610051643.8
Type a | ELvl 1 | Srce | Audn | Ctrl | Lang eng
BLvl m | Form | Conf 0 | Biog | MRec | Ctry nyu
Cont | GPub | LitF 0 | Indx 0
Desc i | Ills | Fest 0 | DtSt t | Dates 1966 , 1965

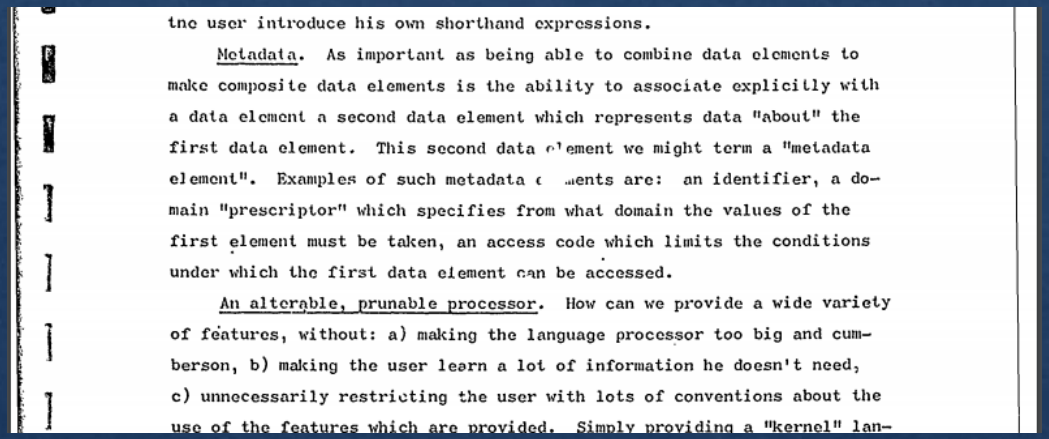
010			65011257
040			DLC ‡b eng ‡c DLC ‡d BTCTA ‡d OCLCQ ‡d OCLCG ‡d CRU ‡d VICSF ‡d WPB ‡d OCLCA ‡d OCLCF ‡d OCLCQ ‡d ALRCP ‡d OCLCA ‡d OCLCQ ‡d ALRPT ‡d WLU ‡d NLC ‡d OCLCQ ‡d CSJ ‡d OCLCO ‡d OCLCQ ‡d OCLCO ‡d CCH ‡d TXGRD ‡d BRL
016			(AMICUS)000001294660
019			899487 ‡a 3798405 ‡a 680171490 ‡a 999352832
043			n-us-ks
050	0	0	HV6533.K3 ‡b C3
050	1	4	PS3505.A66 ‡b I6 1965
051			HV6533.K3 ‡b C3 1966b
082	0	0	364.15/23/0978144 ‡2 21
096			364.1 C24
090			‡b
049			PBUB
100	1		Capote, Truman, ‡d 1924-1984.
245	1	0	In cold blood : ‡b a true account of a multiple murder and its consequences / ‡c Truman Capote.
260			New York : ‡b Random House, ‡c [1966, ©1965]
300			343 pages ; ‡c 22 cm
336			text ‡b txt ‡2 rdacontent
337			unmediated ‡b n ‡2 rdamedia
338			volume ‡b nc ‡2 rdacarrier
500			"Appeared originally in the New Yorker in slightly different form."
520			Recounts the slaying of the Clutter family of Kansas, and the capture, trial and execution of their murderers.
583	1		committed to retain ‡c 20160630 ‡d 20310630 ‡f EAST ‡u http://eastlibraries.org/retained-materials ‡5 CtW ‡z This title retained by Wesleyan University Library on behalf of the Eastern Academic Scholars Trust (EAST) print archive
600	1	0	Hickock, Richard Eugene, ‡d 1931-1965.
600	1	0	Smith, Perry Edward, ‡d 1928-1965.
600	1	7	Hickock, Richard Eugene, ‡d 1931-1965 ‡2 fast ‡0 (OCoLC)fst00197692
600	1	7	Smith, Perry Edward, ‡d 1928-1965 ‡2 fast ‡0 (OCoLC)fst00197693
650		0	Murder ‡z Kansas

MARC record screenshot. Captured by Tammy Troup 20170921.

WorldShare Link: https://bucknell.on.worldcat.org/oclc/36364218.



Book Cover Art. In Cold Blood.1966. New York: Vintage Publishing division of Random House. Available on Wikimedia.



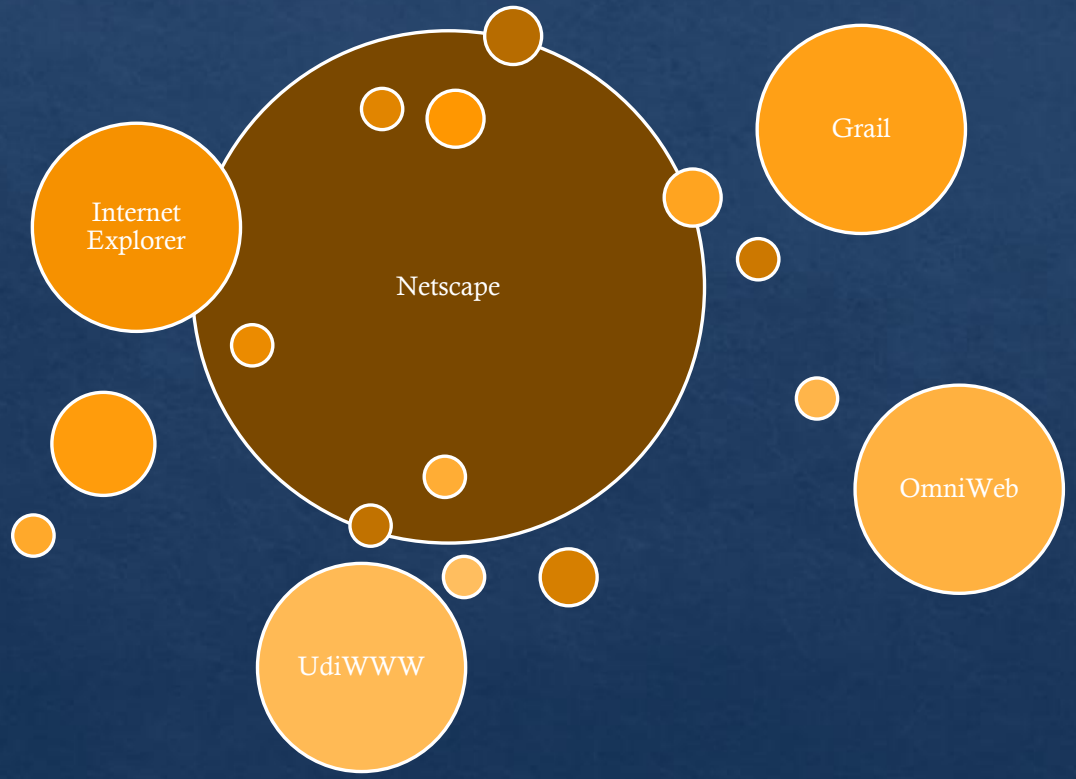
the user introduce his own shorthand expressions.

Metadata. As important as being able to combine data elements to make composite data elements is the ability to associate explicitly with a data element a second data element which represents data "about" the first data element. This second data element we might term a "metadata element". Examples of such metadata elements are: an identifier, a domain "prescriptor" which specifies from what domain the values of the first element must be taken, an access code which limits the conditions under which the first data element can be accessed.

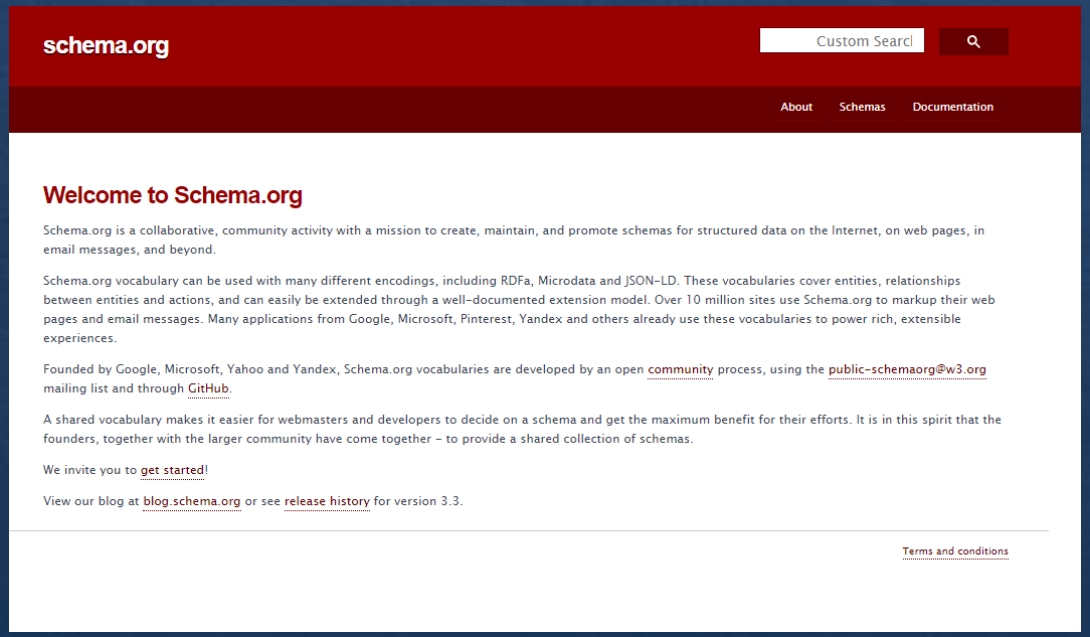
An alterable, prunable processor. How can we provide a wide variety of features, without: a) making the language processor too big and cumberson, b) making the user learn a lot of information he doesn't need, c) unnecessarily restricting the user with lots of conventions about the use of the features which are provided. Simply providing a "kernel" lan-

Bagley, Philip R. Extension of Programming Language Concepts. Air Force Office of Scientific Research, Office of Aerospace Research. Philadelphia, Pennsylvania. 1968. [digital image] http://www.dtic.mil/dtic/tr/fulltext/u2/680815.pdf

Anders, Bill. Earthrise. NASA Apollo 8 mission. 1968. [digital image]. https://www.smithsonianmag.com/science-nature/who-took-legendary-earthrise-photo-apollo-8-180967505/



Kilgour Building. OCLC Dublin, Ohio. Available on Wikimedia.

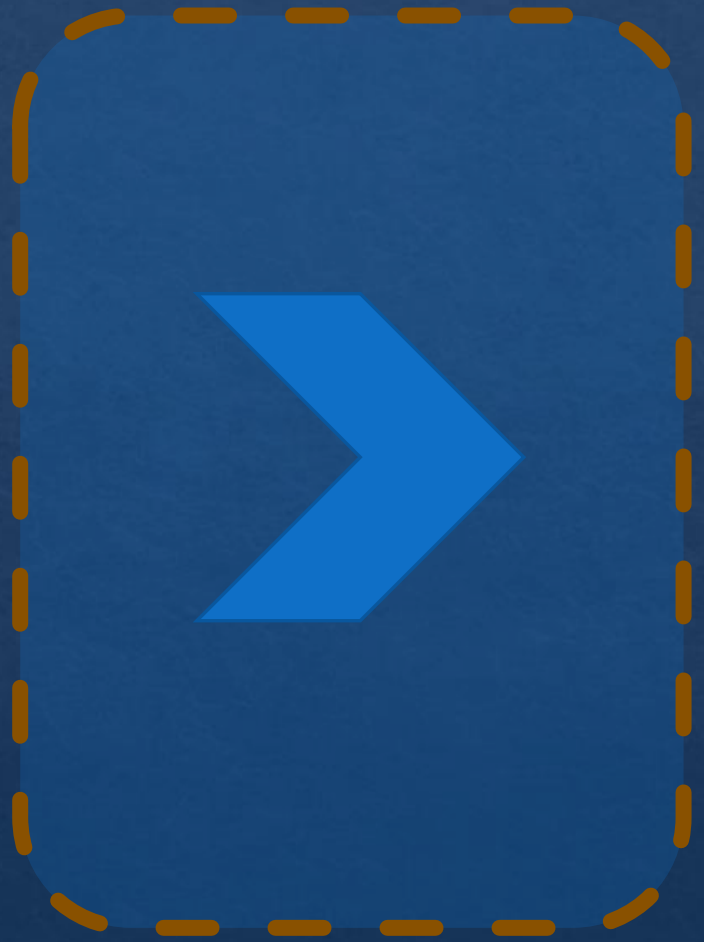


Screenshot of iPhone. Siri launch. 2011. Computer History Timeline. http://www.computerhistory.org/timeline/2011/

μετά-data

use and reuse

Machine



Machine

Electronic Media

WIKIPEDIA
The Free Encyclopedia

Main page
Contents
Featured content
Current events
Random article
Donate to Wikipedia
Wikipedia store

Interaction
Help
About Wikipedia
Community portal
Recent changes
Contact page

Tools
What links here
Related changes
Upload file
Special pages
Permanent link
Page information
Wikidata item
Cite this page

Print/export
Create a book
Download as PDF
Printable version

In other projects
Wikimedia Commons
Wikispecies
Wikiquote

Languages

Helianthus

From Wikipedia, the free encyclopedia
(Redirected from Sunflower)

This article is about the genus Helianthus. *For the common domesticated sunflower, see Helianthus annuus. For the U.S. Navy patrol boat and U.S. Coast and Geodetic Survey launch, see USS Helianthus (SP-585).*
"Sunflowers" redirects here. For the former video game publisher, see Sunflowers Interactive.

Helianthus or **sunflower** (/ˌhiːliˈænθəs/)[2] is a genus of plants comprising about 70 species[3] in the family Asteraceae.[4] Except for three species in South America, all *Helianthus* species are native to North America. The common name, "sunflower", typically refers to the popular annual species *Helianthus annuus*, or the common sunflower, whose round flower heads in combination with the ligules look like the sun.[5] This and other species, notably Jerusalem artichoke (*H. tuberosus*), are cultivated in temperate regions and some tropical regions as food crops for humans, cattle, and poultry, and as ornamental plants.[6]

Perennial sunflower species are not as popular for gardens due to their tendency to spread rapidly and become invasive. Whorled sunflowers, *H. verticillatus*, were listed as an endangered species in 2014 when the U.S. Fish and Wildlife Service issued a final rule protecting it under the Endangered Species Act. The primary threats are industrial forestry and pine plantations in Alabama, Georgia, and Tennessee. They grow to 1.8 m (6 ft) and are primarily found in woodlands, adjacent to creeks and moist, prairie-like areas.[7]

Contents [hide]
1 Description
2 Diversity
3 Gallery
4 References
5 External links
6 See also

Silviculture is the practice of controlling the establishment, growth, composition, health, and quality of forests to meet diverse needs and values.

Description [edit]

Sunflowers are usually tall annual or perennial plants that in some species can grow to a height of 300 cm (120 in) or [illegible] (flower heads), with bright yellow ray florets at the outside and yellow or maroon (also known as a brown/red) disc florets inside. Several ornamental cultivars of *H. annuus* have [illegible] original mutant.[8] During growth, sunflowers tilt during the day to face the sun, but stop once they begin blooming. This tracking of the sun in young sunflower heads is called he[illegible] generally face east.[9] The rough and hairy stem is branched in the upper part in wild plants, but is usually unbranched in domesticated cultivars. The petiolate leaves are dentate a[illegible]e, or often heart-shaped.

They are distinguished technically by the fact that the ray florets (when present) are sterile, and by the presence on the disk flowers of a pappus that is of two awn-like scales that are caducous (that is, easily detached and falling at maturity). Some species also have additional shorter scales in the pappus, and one species lacks a pappus entirely. Another technical feature that distinguishes the genus more reliably, but requires a microscope to see, is the presence of a prominent, multicellular appendage at the apex of the style. Sunflowers are especially well known for their symmetry based on Fibonacci numbers and the golden angle.

Quite a bit of variability is seen among the perennial species that make up the bulk of those in the genus. Some have most or all of the large leaves in a rosette at the base of the plant and produce a flowering stem that has leaves that are reduced in size. Most of the perennials have disk flowers that are entirely yellow, but a few have disk flowers with reddish lobes. One species, *H. radula*, lacks ray flowers altogether.

Helianthus species are used as food plants by the larvae of many lepidopterans. The seeds of *H. annuus* are used as human food.

Sunflowers

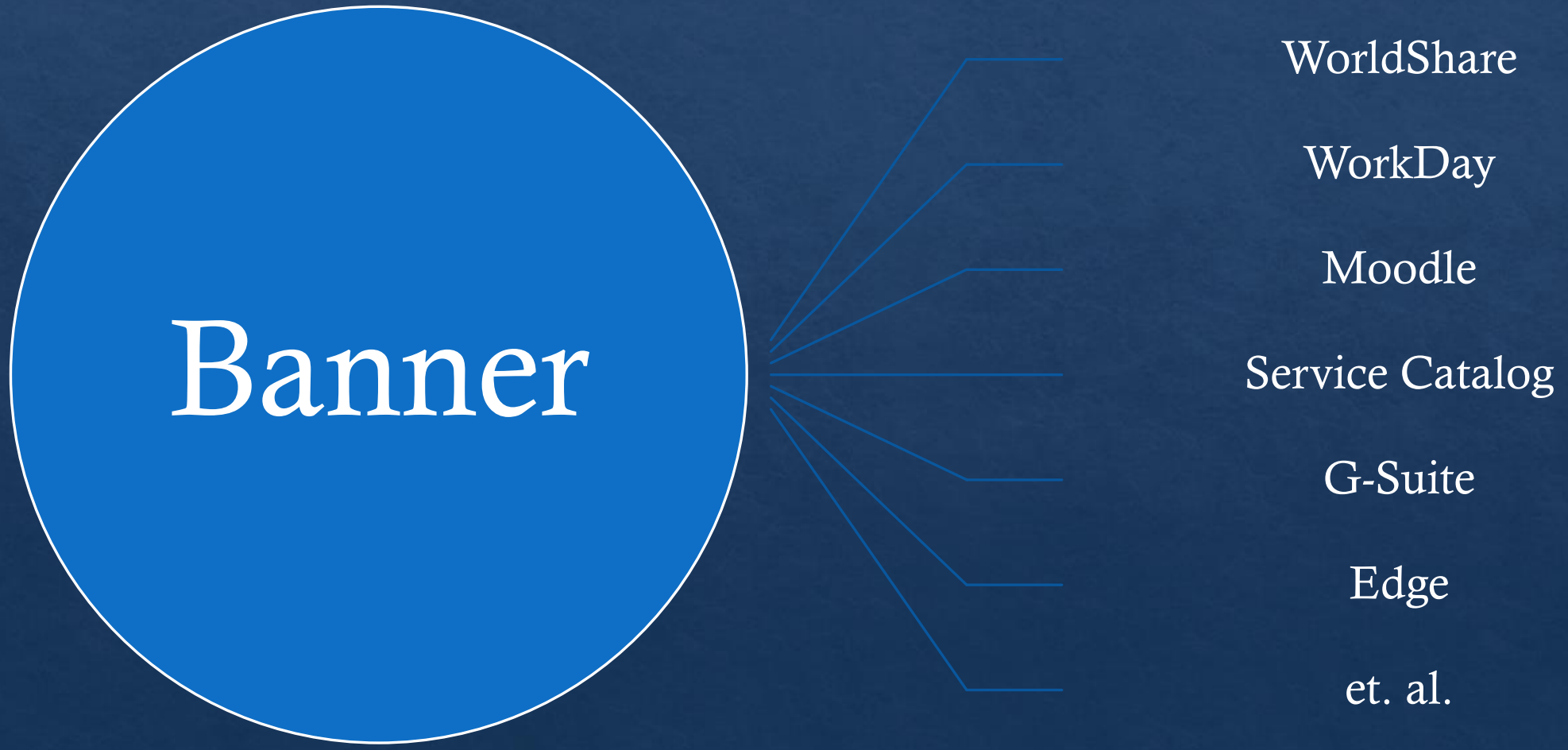
Common sunflower

Scientific classification

Kingdom:	Plantae
Clade:	Angiosperms
Clade:	Eudicots
Clade:	Asterids
Order:	Asterales
Family:	Asteraceae
Subfamily:	Asteroideae
Supertribe:	Helianthodae
Tribe:	Heliantheae
Genus:	***Helianthus*** L.[1]

Synonyms[1]

API use at Bucknell



OMDb

http://www.omdbapi.com/?i=tt3896198&apikey=2c2c3314

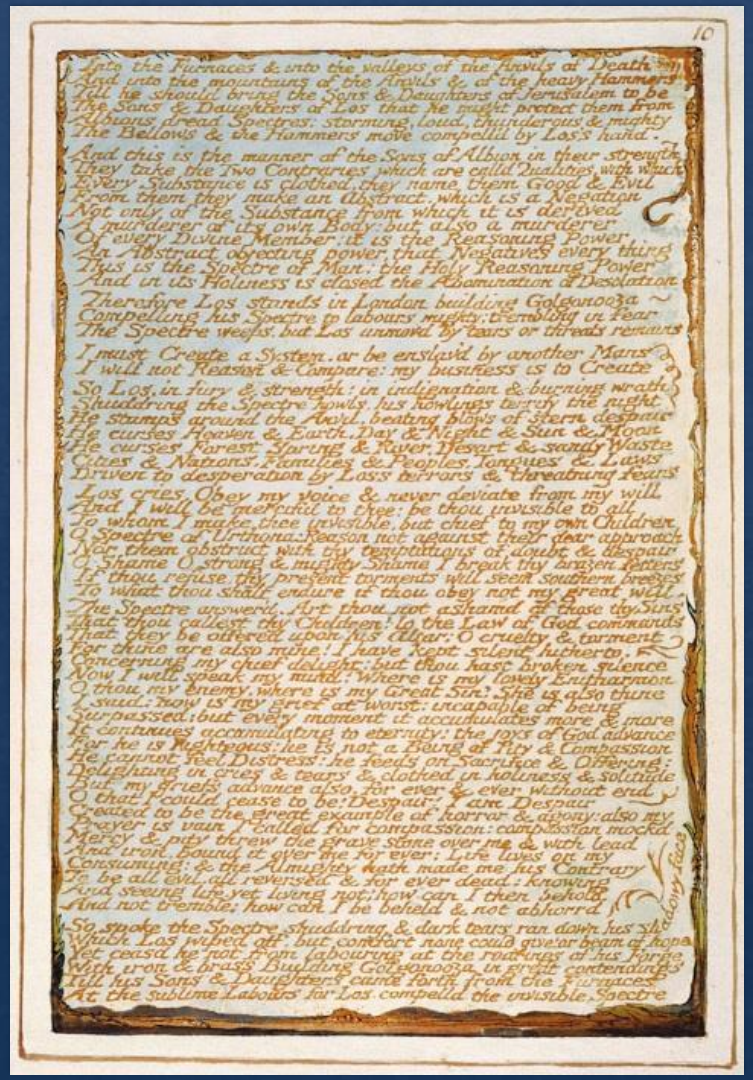
{
Title: "Guardians of the Galaxy Vol. 2",
Year: "2017",
Rated: "PG-13",
Released: "05 May 2017",
Runtime: "136 min",
Genre: "Action, Adventure, Sci-Fi",
Director: "James Gunn",
Writer: "James Gunn, Dan Abnett (based on the Marvel comics by), Andy Lanning (based on the Marvel comics by), Steve Englehart (Star-lord created by), Steve Gan (Star-lord created by), Jim Starlin (Gamora and Drax created by), Stan Lee (Groot created by), Larry Lieber (Groot created by), Jack Kirby (Groot created by), Bill Mantlo (Rocket Raccoon created by), Keith Giffen (Rocket Raccoon created by), Steve Gerber (Howard the Duck created by), Val Mayerik (Howard the Duck created by)",
Actors: "Chris Pratt, Zoe Saldana, Dave Bautista, Vin Diesel",
Plot: "The Guardians must fight to keep their newfound family together as they unravel the mystery of Peter Quill's true parentage.",
Language: "English",
Country: "USA",
Awards: "Nominated for 1 Oscar. Another 12 wins & 42 nominations.",
Poster: "https://ia.media-imdb.com/images/M/MV5BMTg2MzI1MTg3OF5BMl5BanBnXkFtZTgwNTU3NDA2MTI@._V1_SX300.jpg",
Ratings: [
{**Source**: "Internet Movie Database",
Value: "7.7/10"
},
{**Source**: "Rotten Tomatoes",
Value: "83%"
},
{**Source**: "Metacritic",
Value: "67/100"
}
],
Metascore: "67",
imdbRating: "7.7",
imdbVotes: "378,906",
imdbID: "tt3896198",
Type: "movie",
DVD: "22 Aug 2017",
BoxOffice: "$389,804,217",
Production: "Walt Disney Pictures",
Website: "https://marvel.com/guardians",
Response: "True"
}

Exercise 3 & Discussion 3

Closed box and Linked Data discussion

μετά-data

benefits & drawbacks



Blake, William. Jerusalem The Emanation of The Giant Albion. object 10 (Bentley 10, Erdman 10, Keynes 10). 1804. Retrieved 20160623 http://www.blakearchive.org/exist/blake/archive/object.xq?objectid=jerusalem.e.illbk.10&java=no

"I must create a system or be
ensl'vd by another mans
I will not reason and compare
I must create"

--William Blake,
Jerusalem the Emanation of the Giant Albion, object 10

Discussion 4

What are the potential benefits of standardizing information?

What are the potential drawbacks of standardizing information?

“…” of exchanging information via machine?

Benefits

- Efficiency
- Common understanding
- Greater exchange of information
- Consistent exchange of information
- Consistent output
- Accountability
- Reliability in communication
- Establishes base for futures planning
- Establishes base for education
- Extensible systems allow for flexibility
- Record of change

Drawbacks

- Learning curve to gain knowledge of the system
- Perceived barrier to understanding
- Process thought trumps innovative thought
- Discouragement of experimental thought
- Rigid thinking/reliance on dogma
- Lack of flexible standards may mean lack of flexibility
- Silos of knowledge
- Appeal to authority instead of rational thought
- Subject to the vagaries of human thought and error
- Entrenched bias and prejudice
- Gatekeeping behavior
- Passive reception of knowledge instead of engaged learning experiences

ROOT GATHERING BAG

Northwest Museum of... | Confederated Tribes...

ACCESS IMAGE MEDIA

Description:
Round, twined, cylindrical cornhusk bag. Bird and animal designs. Black fabric used in starting base. Braid at top edge with warp fibers clipped on inside., height: 7"; Diameter: 4 3/4"

COMMUNITY:
Northwest Museum of Arts and Culture, Confederated Tribes of Warm Springs

PROTOCOL:
Northwest Museum of Arts and Culture Public Access, Warm Springs Community Public Access

CATEGORY:
Artistry and Artifacts

ORIGINAL DATE:
1870-1900

CREATOR:
Wasco-Confederated Tribes of Warm Springs, Maker
Southern Plateau-Sahaptin, culture group

LANGUAGE:
English

RIGHTS:
Copyright for permission to reproduce Northwest Museum of Arts & Culture/Eastern Washington State Historical Society Spokane.

Demonstration of the Mukurtu Content Management System. Plateau People's Web Portal. Root Gathering Bag. Retrieved 20180531. https://plateauportal.libraries.wsu.edu/digital-heritage/root-gathering-bag-3

μετά-data

preservation

Long tail of digital preservation

Layers of Metadata

- Develop Project Metadata
- Select sustainable file formats (or convert final files)
- Organize and label files
- Embed/Sidecar File level metadata

Project Metadata

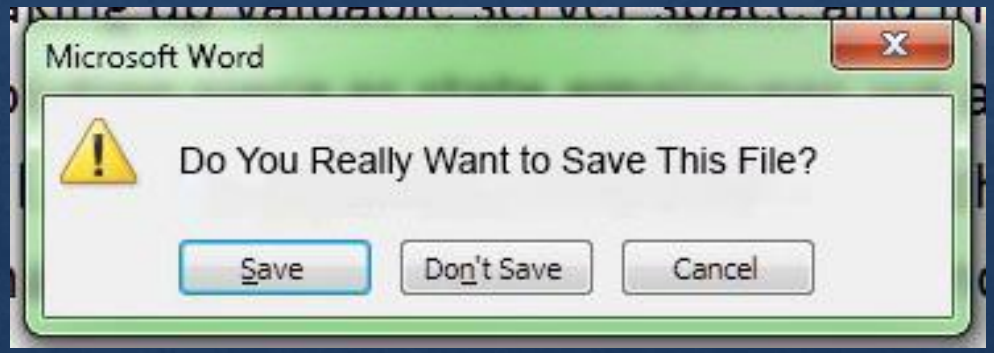
Administrative Info	Title, Creator, Dates, Description, Purpose, Users/Community, etc.
Rights & Info Policy	Copyright, Risk Management, Scope & Domain, Selection, Permissions
Tech & Information Documentation	Metadata schema (data, images, files, content), Folder hierarchy, File Naming Convention, File retention, Tech review
Project Management	Roles & Responsibilities, Communication, Workflow & Timeline, Marketing

Sustainable File Formats

- Working, Dissemination, and Preservation Formats
- Limited File Formats (G Suite users should export to create system independent information packages)
- Adhere to Local Repository Standards

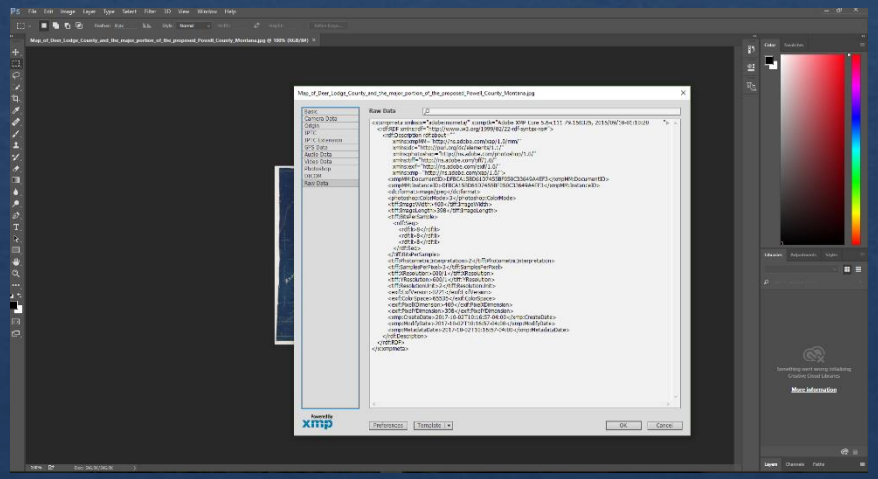
Organize, Label, & Curate

- Determine Folder hierarchy and file naming conventions
  - Directory and File naming conventions formatted for storage
    - CamelCase
    - _ or -
    - ISO dates (YYYYMMDD)
    - Leading zeroes (0001)
  - Descriptive File Naming Convention:
    - ProjectName_Planning.docx
    - ProjectName_data.xlsx
    - Access_PN_XXX.jpg
    - Preserve_PN_XXX.tif
- Create Working and Final Directories:
    - YYYY_Project Title
      - Working Documents
      - Final Documents
- Curate Content

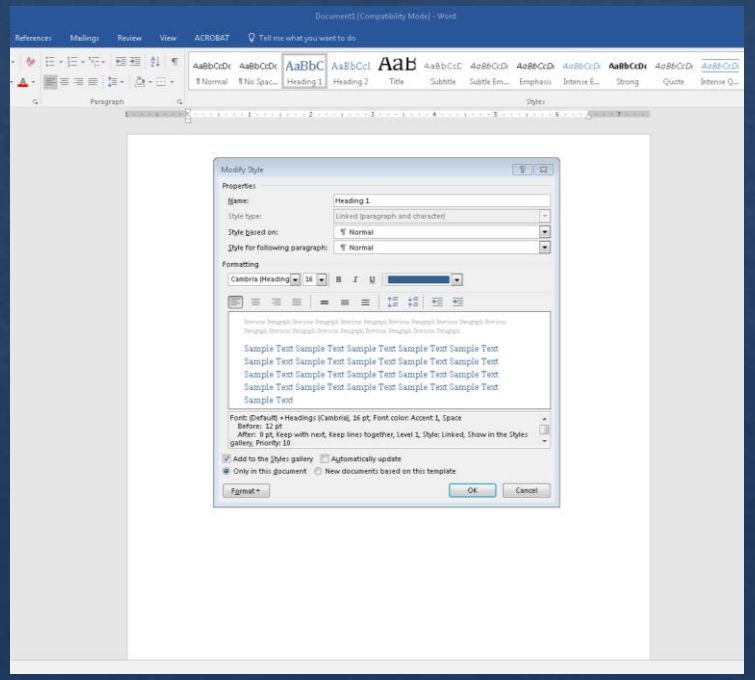


File Metadata (embedded)

Technical Metadata

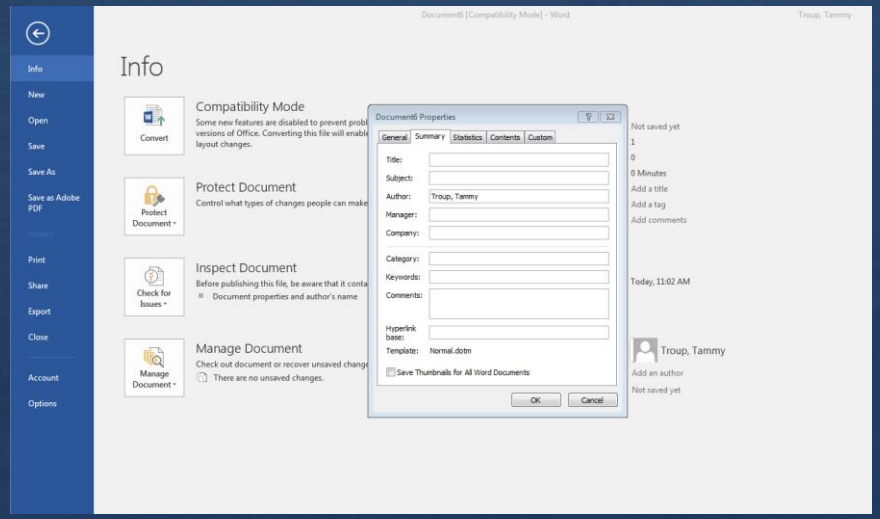


Structural Metadata

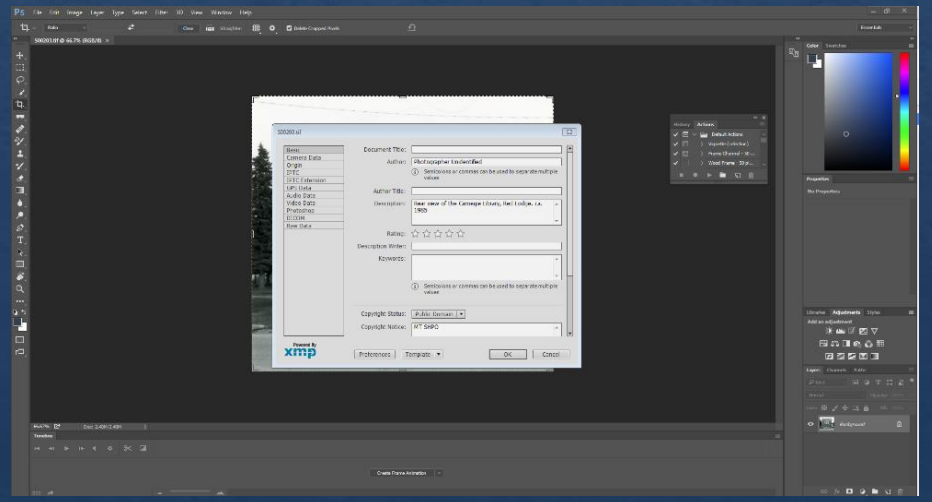


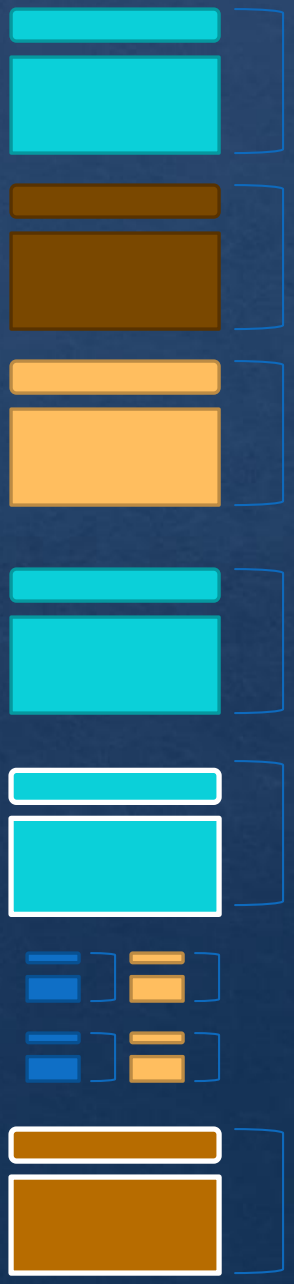
File Metadata (embedded)

Administrative Metadata



Descriptive Metadata





txt--manifest

md5--checksum

XML—collection level

txt--collection description (README)

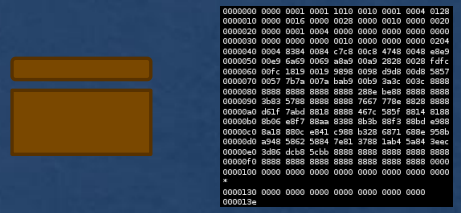
pdf--rights documents

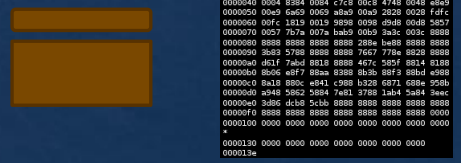
tiff & XML—digital objects

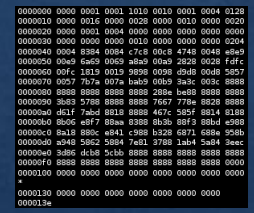
pst—communication files

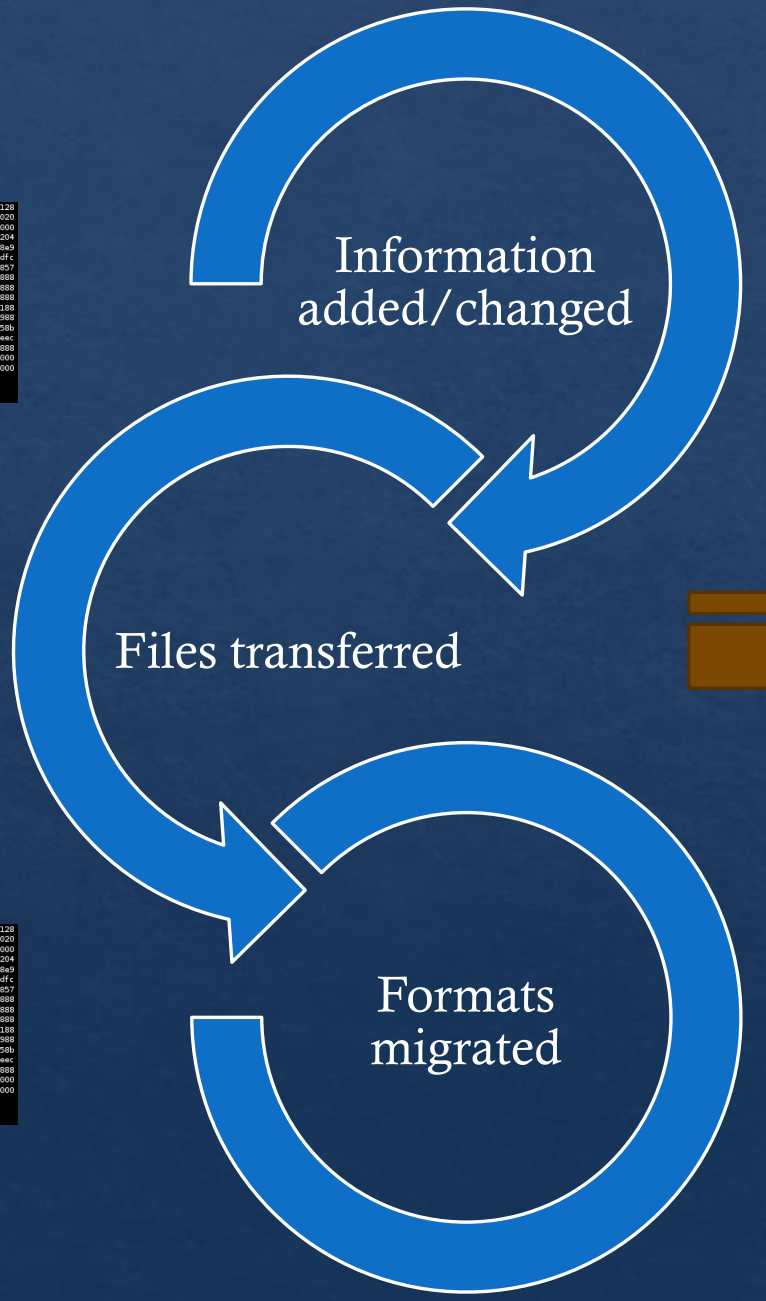
Digital Object

Information package ready for exchange or storage.



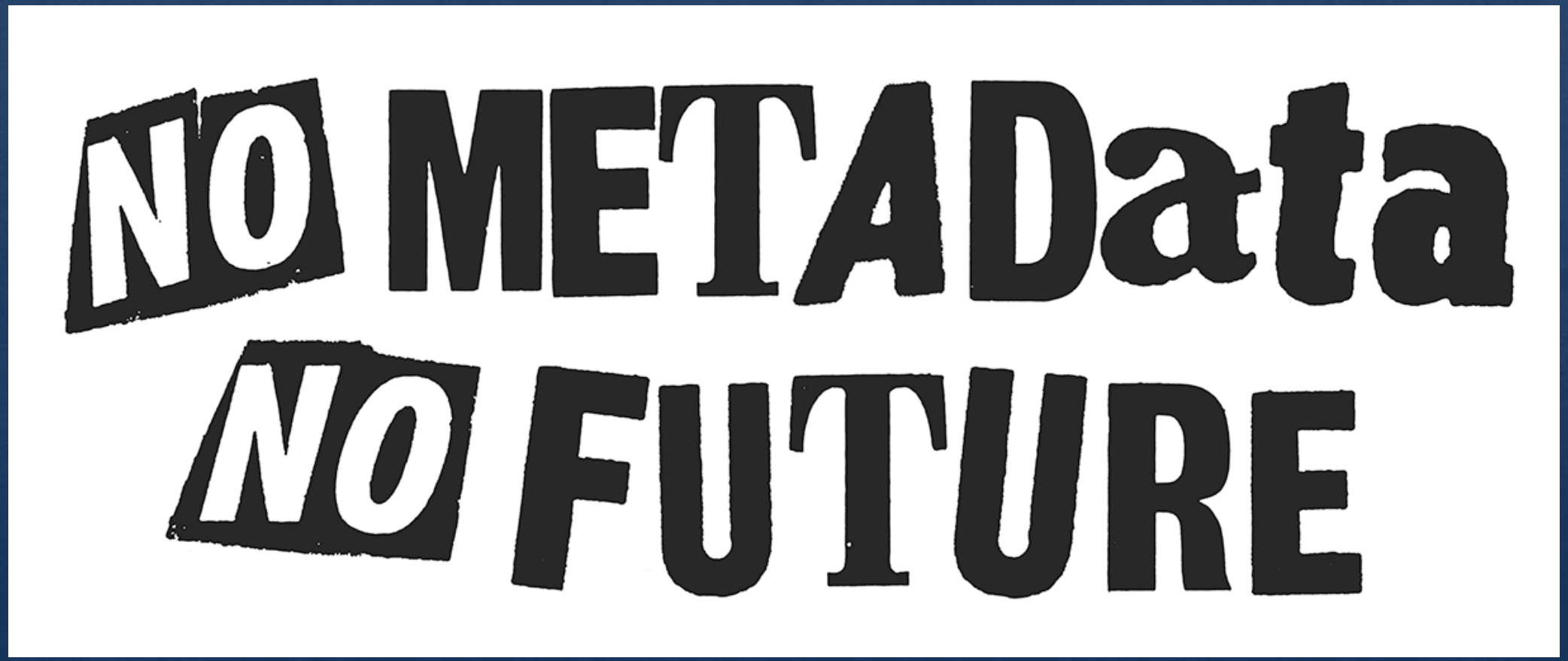





Information added/changed
Files transferred
Formats migrated

Example:LC METS

- http://www.loc.gov/standards/premis/louis-2-1-mets.xml
- https://www.loc.gov/item/gottlieb.09611/



Unidentified. No Metadata No Future Logo. 2017. Digital logo. Retrieved from the Internet 20171002. http://nometadata.org/logo

Exercise 4

Review sample project metadata elements.

Develop your own project metadata and

Identify schema and relevant elements (if a database is developed)

https://docs.google.com/document/d/1N1Sz08LcRa7gZusIoQtA65WoJtmUPfyUtFel1ORvTRU/edit?usp=sharing

Suggested Readings

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- Sample, I. (2015). Google boss warns of 'forgotten century' with email and photos at risk. [online] Available at: https://www.theguardian.com/technology/2015/feb/13/google-boss-warns-forgotten-century-email-photos-vint-cerf [Accessed 30 May 2018].